

Date: Thursday, 10/19/2006 2:50:28 PM
User: Kim Johnston

Process Sheet

Customer : CU-DAR001 Dart Helicopters Services	Drawing Name : SHORT STEP ASSEMBLY,LO-SKID
Job Number : 29077	
Estimate Number : 12545	
P.O. Number : <i>N/A</i>	Part Number : D350591115
This Issue : 10/19/2006 S.O. No. : <i>N/A</i>	Drawing Number : D2354 REV D
Prsht Rev. : NC	Project Number : N/A
First Issue : <i>N/A</i> Type : LARGE FAB ASSY	Drawing Revision : D
Previous Run : 28843	Material : <i>N/A</i>
Written By : _____	Due Date : 10/31/2006
Checked & Approved By : <i>[Signature]</i> 06.10.19	Qty: <i>8</i> Um: Each
Comment : Est Rev:G RE-FORMAT 02-03-28 SM	

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
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1.0	DC	DOCUMENT CONTROL
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Comment: DOCUMENT CONTROL

Photocopy bluefile and type labels as per PPP D350-591-115 CHG0013

06/10/19 *(4)*

2.0	D2244116	Step Extrusion
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Comment: Qty.: 1.0000 Each(s)/Unit Total : 4.0000 Each(s)

Pick:

Qty	Part Number	Description	Batch
1	D2244-128 Extrusion	<i>323404</i>	

P.E. 06.10.20

3.0	LARGE FAB 1	LARGE FABRICATION RESOURCE 1
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Comment: LARGE FABRICATION RESOURCE 1

1-Cut D2244-128 extrusion to 59.34" long as per Dwg D2354

2-Drill extrusion per Dwg D2354 using Jig DT8230 for rivets.

3-Deburr and bevel ends.

4-Drill hole for bushings and countersink per drawing D2311

P.E. 06.10.20

P.E. 06.10.20

P.E. 06.10.20

P.E. 06.10.23

4.0	QC5	INSPECT WORK TO CURRENT STEP
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Comment: INSPECT WORK TO CURRENT STEP

06-10-23 *(B)*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

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Job Number:



Seq. #:

Machine Or Operation:

Description :

5.0

D267334

End Plate



Comment: Qty.: 2.0000 Each(s)/Unit Total : 8.0000 Each(s)

End Cap

Batch: 325396

JE 06-10-23 *RV*

6.0

D2275

Bushing



Comment: Qty.: 1.0000 Each(s)/Unit Total : 4.0000 Each(s)

Bushing

Batch: B17557

JE 06-10-23 *RV*

7.0

LARGE FAB 1

LARGE FABRICATION RESOURCE 1



Comment: LARGE FABRICATION RESOURCE 1

1-Weld Fwd cap and bushing as per Dwg D2354

Aluminum Rod Batch: M19612

JE 06-10-23 *8*

2-Grind end cap and bottom bushing welds flush

JE 06-10-24 *8*

3-Machine bushing top weld flush

JE 06-10-24 *8*

8.0

QC9

VISUAL WELDING INSPECTION



Comment: VISUAL WELDING INSPECTION

70610248

1106/10/24 (8)

9.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

706-10-248

10.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

06-10-27

11.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

JE 06-10-24 *8*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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Job Number: 29077

Part Number: D350591115

Job Number:



Seq. #:

Machine Or Operation:

Description :

12.0

D26431

Lo Skid Step LH



Comment: Qty.: 1.0000 Each(s)/Unit Total : 4.0000 Each(s)

Lo Skid Step LH

Batch: 16928

JE. 06.11.9

8✓

13.0

D26432

LO SKID STEP RT



Comment: Qty.: 1.0000 Each(s)/Unit Total : 4.0000 Each(s)

LO SKID STEP RT

Batch: ~~16928~~ B9725 *

JE. 06.11.9

8✓

14.0

MS20600AD4W3

Cherry Rivets



Comment: Qty.: 1.0000 Each(s)/Unit Total : 4.0000 Each(s)

Cherry Rivets

Batch: M101519 = 100

JE. 06.11.9

8✓

15.0

LARGE FAB 1

LARGE FABRICATION RESOURCE 1



Comment: LARGE FABRICATION RESOURCE 1

1-Rivet Leg Assembly as per Dwg D2354

2-Inspect for foreign object per QSI 024

3-Weld Aft end cap as per Dwg D2354

AL ROD A/R Batch: M18838

4-Grind end cap welds flush

JE. 06.11.9

8

JE. 06.11.9

8

JE. 06.11.9

8

JE. 06.11.9

8✓

16.0

QC9

VISUAL WELDING INSPECTION



Comment: VISUAL WELDING INSPECTION

AD 06/11/10 (8)

✓

17.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

AD 06/11/10 (8)

✓

W/O:		WORK ORDER CHANGES					
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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Job Number: 29077

Part Number: D350591115

Job Number:



Seq. #:

Machine Or Operation:

Description :

18.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Touch up Chemical Conversion Coat as per QSI 005 4.1

a.m. 06/11/15 (8) ✓

19.0

POWDER COATING

POWDER COATING



Comment: POWDER COATING

Powder Coat White Gloss (Ref: 4.3.5.1) as per QSI 005 4.3

✓ PC 06/11/16 x8 ✓

20.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Wing Walk per Dwg D2354 and QSI 005 4.4

Batch: 1102635

a.m. 06/11/20 (8) ✓

21.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

✓ B 06/11/22 (8) ✓

22.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Pick Packing Kit

23.0

D2171

Clamp



Comment: Qty.: 2.0000 Each(s)/Unit Total : 8.0000 Each(s)

Clamp

Batch: B27244

✓ 14x ✓ B29085 2p

24.0

D2182

Heat Shrink



Comment: Qty.: 0.5830 f(s)/Unit Total : 2.3320 f(s)

Rubber Cushion 3.5" long x2

Batch: B28042

✓ B28042 RTO

25.0

D2274

Radius Block



Comment: Qty.: 4.0000 Each(s)/Unit Total : 16.0000 Each(s)

Radius Block

Batch: B28824

✓ B28824

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
Dec-23	24	Part s/b D2182 <u>B</u> per blue file permanent chg	U G. G. G.	Dec 11. 23 G. G. G.		U	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes ☒ No ☐ DQA: PD Date: Dec 12/24
 QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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Part Number: D350591115

Job Number:



Seq. #:

Machine Or Operation:

Description :

26.0

D23625

Support Bracket



Comment: Qty.: 1.0000 Each(s)/Unit Total : 4.0000 Each(s)

Support Bracket

Batch: B13374 X2

B29078 2X

1B inspecté pour séquençement (4)

29078 4X

27.0

AN337A

Bolt



Comment: Qty.: 2.0000 Each(s)/Unit Total : 8.0000 Each(s)

Bolt

Batch: B13478

28.0

AN420A

Bolt



Comment: Qty.: 4.0000 Each(s)/Unit Total : 16.0000 Each(s)

Bolt

Batch: M16895

29.0

AN422A

Bolt



Comment: Qty.: 1.0000 Each(s)/Unit Total : 4.0000 Each(s)

Bolt

Batch: B17250

30.0

AN960JD10

Washer



Comment: Qty.: 4.0000 Each(s)/Unit Total : 16.0000 Each(s)

Washer

Batch: M100743

31.0

AN960JD416

Washer



Comment: Qty.: 6.0000 Each(s)/Unit Total : 24.0000 Each(s)

Washer

Batch: M102339

S. A. H. R. 0.0342

32.0

MS21042L3

Nut



Comment: Qty.: 2.0000 Each(s)/Unit Total : 8.0000 Each(s)

Pick:

Packing Kit Qty Part Number Description Batch

2 MS21042L3

Nut (or -3)

M101917

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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Job Number: 29077

Part Number: D350591115

Job Number:



Seq. #:

Machine Or Operation:

Description :

33.0

MS21042L4

Nut



Comment: Qty.: 5.0000 Each(s)/Unit Total: 20.0000 Each(s)

Pick:

Packing Kit Qty Part Number Description Batch

✓ 5 MS21042L4 Nut (or -4) M19185

34.0

QC4

INSPECT 100% KITS FOR COMPLETENESS



Comment: INSPECT 100% KITS FOR COMPLETENESS

35.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and pack for shipping as per PPP D350-591-121

Location:

PPP Rev: G

36.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

Job Completion



4061123

QY1 0.6F x DZ856-400 B 28228
(400-1720)

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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NOTE: Date & initial all entries

DART

DESIGN KE	DRAWN BY PH	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED #	APPROVED #	DRAWING NO. D2354	REV. D SHEET 1 OF 2
DATE 05.11.14		TITLE LOW SHORT STEP ASSEMBLY	SCALE NTS
A	95.02.14	NEW ISSUE	
B	97.05.22	END CAPS CHANGED	
C	97.07.23	ADDED BUSHING AND FACING INFO	
D	05.11.14	UPDATE FINISHING NOTE	

D2354 LOW SHORT STEP ASSEMBLY PARTS LIST

Part No.	Description	QTY
D2354	Low Short Step Assembly	X
D2244-59.4	STEP EXTRUSION*	1
D2275	BUSHING	1
D2643-1	STEP LEG ASSEMBLY	1
D2643-2	STEP LEG ASSEMBLY	1
D2673-34	STEP END PLATE	2
MS20600AD4W3	RIVETS	12

*cut per drawing

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 29077

RELEASED
05.11.28

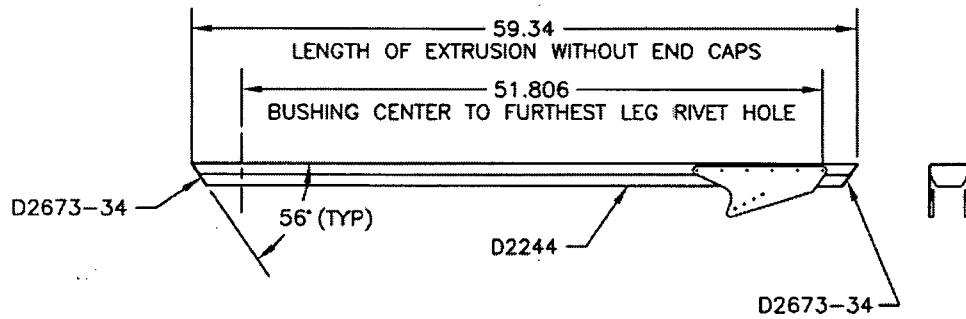
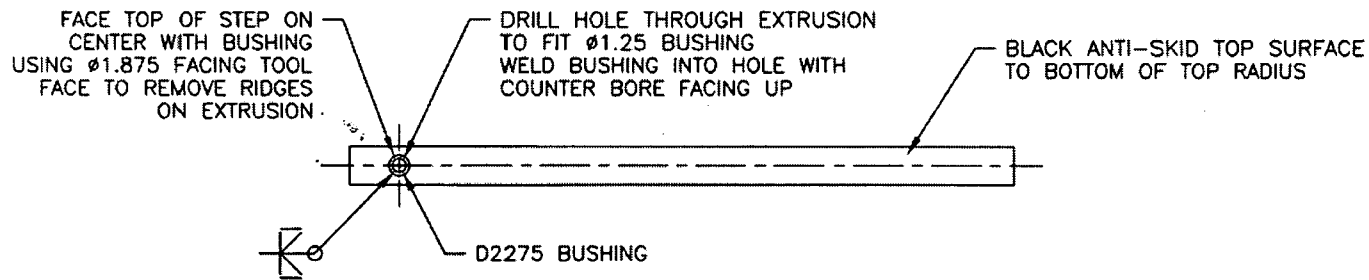
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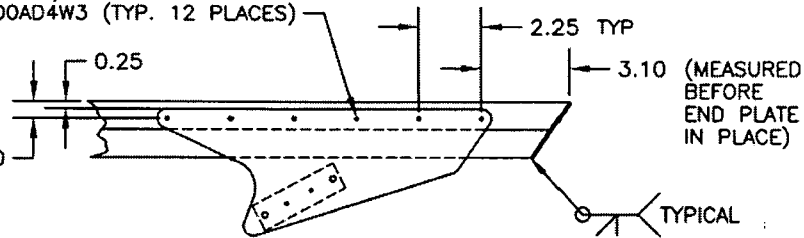
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DESIGN	KE	DRAWN BY	PH	DART AEROSPACE LTD	REV. D
CHECKED	<i>[Signature]</i>	APPROVED	<i>[Signature]</i>	HAMKESBURY, ONTARIO, CANADA	
DATE	05.11.14	DRAWING NO.	D2354		SHEET 2 OF 2
		TITLE	LOW SHORT STEP ASSEMBLY		SCALE
					NTS

RELEASED
05.11.28



DRILL $\phi 0.128$ ON BOTH SIDES OF D2244 TO MATCH D2643-1/-2 HOLE PATTERN RIVET D2643-1/-2 TO D2244 USING MS20600AD4W3 (TYP. 12 PLACES)



STEP LEG DETAIL

D2354 LOW SHORT STEP ASSEMBLY

- 1) MAKE FROM D2244 STEP EXTRUSION
- 2) WELD PER DART QSI 004
- 3) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT ASSEMBLY WHITE (4.3.5.1) PER DART QSI 005 4.3
BLACK ANTI-SKID PAINT PER DART QSI 005 4.4
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

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WORK ORDER
NO. 2407

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